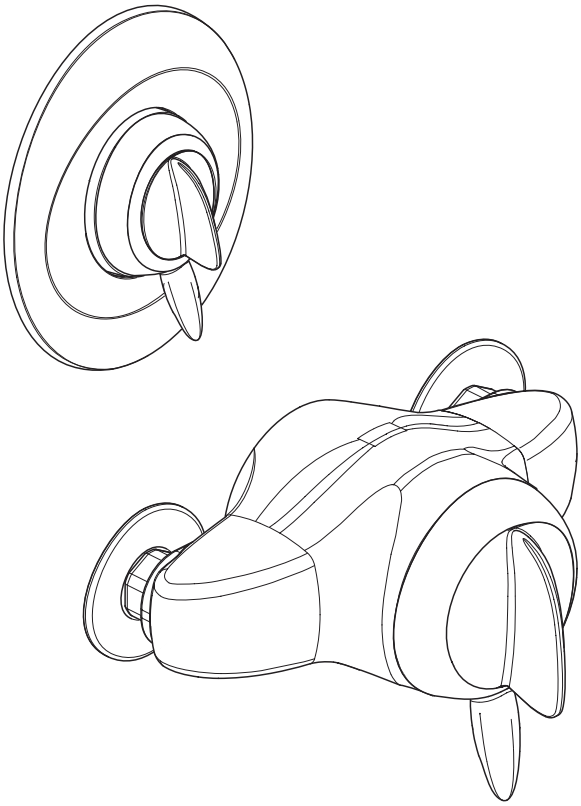
mira

Gem 88



MIRA GEM 88

SHOWER CONTROL

Installation and User Guide

These instructions are to be left with the user

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INTRODUCTION

Thank you for purchasing a quality Mira product. To enjoy the full potential of your new product, please take time to read this guide thoroughly, having done so, keep it handy for future reference.

A range of Mira 1/2" manual shower controls which provide independent selection of spray force and temperature. The Mira Gem 88 is available with a choice of surface mounted and built-in models.

The Mira Gem 88 is not a thermostatic shower control and does not sense supply temperature or pressure variations. Therefore, inlet water temperatures and pressures especially the hot, should be relatively constant in order to maintain a stable showering temperature.

The Mira Gem 88 is suitable for installation with the following packages:-

- Gravity fed systems (balanced pressure hot and cold)
- Pumped systems (balanced pressure hot and cold)
- Unvented thermal store * (balanced pressure hot and cold)
- Unvented systems * (balanced pressure hot and cold)

* Fitted with a pressure reducing valve (PRV) recommended to be set at 3.5 bar. **The Mira Gem 88 is not suitable for mains pressure (cold) with gravity pressure (hot) or combination boilers/instantaneous water heaters.**

Shower controls covered by this guide:

Mira Gem 88

Surface mounted shower control for connection to **exposed pipework**.

Chrome or white colour models are available.

The Mira Gem 88 is designed to be fitted with the pipe centres set at a distance of 153 mm for rear supply connection and the pipes centre set at a distance of 151 mm for rising / falling pipes connection (See the installation template provided).

If the Mira Gem is replacing an existing shower, the distance between the pipe centres can vary from 149 to 154 mm to facilitate the installation.

Mira Gem 88 B

Built-in shower control for connection to **concealed pipework**.

Chrome or white colour models are available.

If you experience any difficulty with the installation or operation of your new shower control, then please refer to **"Fault Diagnosis"**, before contacting Kohler Mira Limited. Our telephone and fax numbers can be found on the back cover of this guide.

Guarantee

For **domestic installations**, Mira Showers guarantee the Mira Gem 88 against any defect in materials or workmanship for a period of **one year** from the date of purchase.

For **non-domestic installations**, Mira Showers guarantee the Mira Gem 88 against any defect in materials or workmanship for a period of **one year** from the date of purchase.

For terms and conditions refer to the back cover of this guide.

Recommended Usage

Application	
Domestic	✓
Light Commercial	✓
Heavy Commercial	×
Healthcare	×

SAFETY : WARNINGS

This Mira Gem 88 Thermostatic Mixer is precision engineered and should give continued safe and controlled performance, provided:

1. It is installed, commissioned, operated and maintained in accordance with manufacturers recommendations.
2. Periodic attention is given, when necessary, to maintain the product in good functional order.

Caution!

1. **Read all of these instructions and retain this guide for later use**.
2. Make sure that this guide is left with the user. Pass on this guide in the event of change of ownership of the installation site.
3. Follow all warnings, cautions and instructions contained in this guide, and on or inside the shower.
4. Installation must be carried out in accordance with these instructions, and must be conducted by designated, qualified and competent personnel.
5. The plumbing installation must comply with the requirements of UK Water Regulations/Bye-laws (Scotland), Building Regulations or any particular regulations and practices, specified by the local water company or water

undertakers. The installation should be carried out by a plumber or contractor who is registered, or is a member of, an association such as:

Institute of Plumbing (IOP), throughout the UK

National Association of Plumbing, Heating and Mechanical Services Contractors (NAPH & MSC), England and Wales

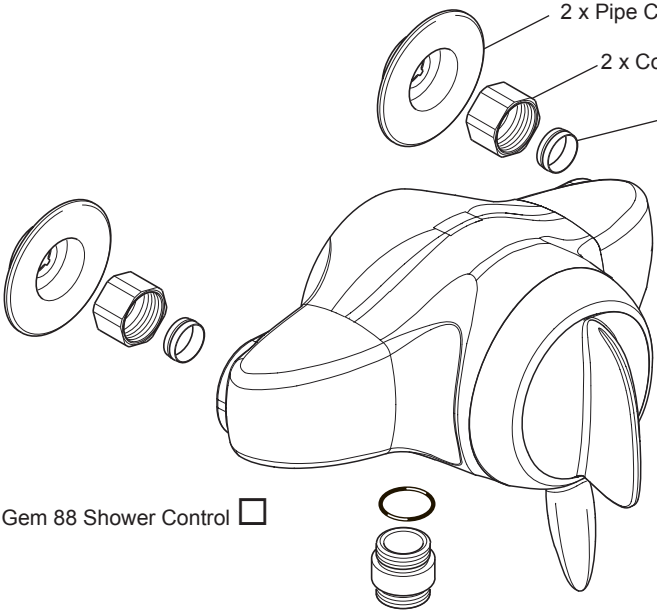
Scottish and Northern Ireland Plumbing Employers' Federation (SNIPEF), Scotland and Northern Ireland

6. The temperature control can be turned from **FULL HOT** to **FULL COLD**. As such, turning the control to full hot will deliver water at the hot water storage temperature.
7. This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning the use of the appliance by a person responsible for their safety.
8. Children should be supervised to make sure that they do not play with the appliance.
9. Sunburn or skin conditions can increase your sensitivity to hot water.
10. If water leaks from the pressure relief valve, maintenance will be required before the appliance can be safely used.
11. If the shower is dismantled during installation or servicing then upon completion the product must be inspected to ensure there are no leaks.
12. **DO NOT** commission this appliance if water leaks from the unit.
13. **DO NOT** operate this appliance if water leaks from this appliance.
14. The shower head must be de-scaled regularly. Lack of regular shower head cleaning will lead to poor performance and cause early failure of the appliance. Refer to the Shower Fittings User Guide for more information.
15. If pipework and/or electical cables enter the shower from the rear through a hole in the wall . Provision must be made to prevent water ingress back into the wall structure.
16. Care is required when adjusting flow or temperature, make sure that the temperature has stabilised.
17. Rapid/Excessive movement of the flow and/or temperature control levers may result in momentary unstable blend temperatures.
18. Make sure that you fully understand how to operate this shower and make sure that it is properly maintained in accordance with the instructions given in this manual.
19. Having completed the installation, make sure that the user is familiar with the operation of the appliance.
20. When this appliance has reached the end of its serviceable life, it should be disposed of in a safe manner, in accordance with current local authority recycling, or waste disposal policy.

PACK CONTENTS

☑ Tick the appropriate boxes to familiarize yourself with the part names and to confirm that the parts are included.

1. Mira Gem 88 Surface Mounted Shower Control

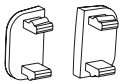


2 x Pipe Concealing Plates ☐

2 x Compression Nuts ☐

**2 x Olives ☐

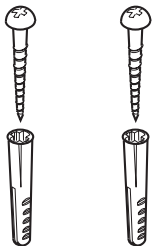
1 x Mira Gem 88 Shower Control ☐



** 4 x Concealing Caps ☐ (2 Spares)

1 x Installation Template ☐

** 2 x Fixing Screws ☐



** 2 x Wall Plug ☐

** 1 x Flow Regulator ☐

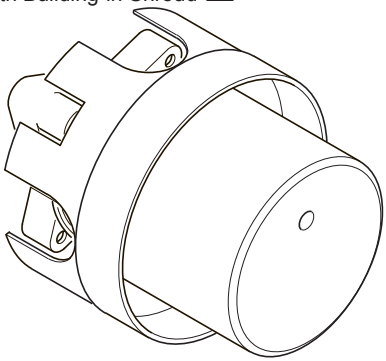
** 1 x 2.5 mm A/F Hexagonal Wrench ☐

** Supplied in the component pack.

2. Mira Gem 88 Built-in shower control

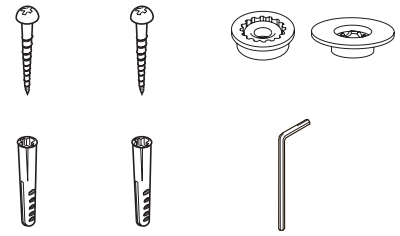
1 x Mira Gem 88 B Shower Control

With Building-in Shroud ☐



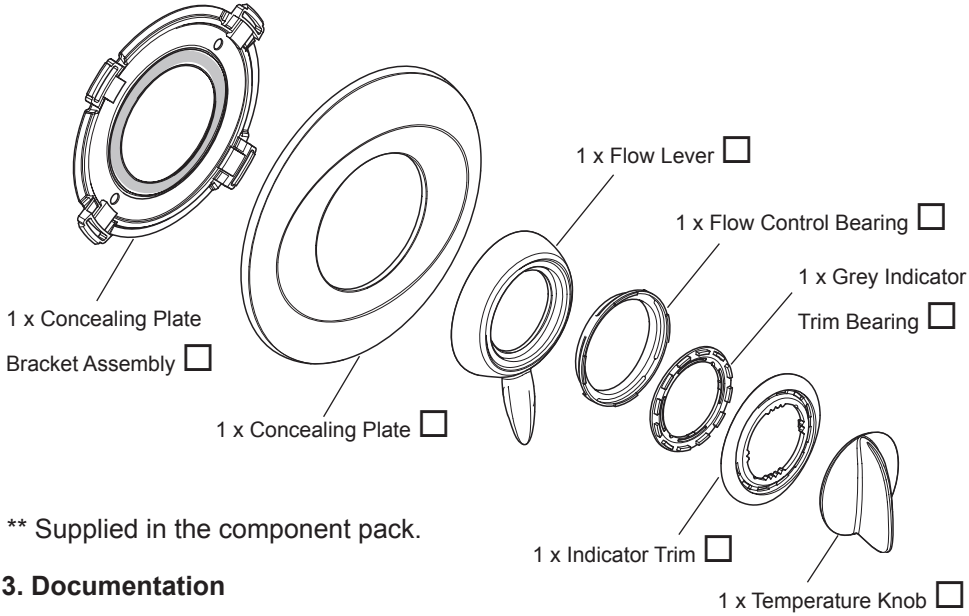
** 2 x Fixing Screw ☐

** 2 x Flow regulator ☐



** 2 x Wall Plug ☐

** 1 x 2.5 mm A/F Hexagonal Wrench ☐


1 x Concealing Plate Bracket Assembly ☐
1 x Concealing Plate ☐
1 x Flow Lever ☐
1 x Flow Control Bearing ☐
1 x Grey Indicator Trim Bearing ☐
1 x Indicator Trim ☐
1 x Temperature Knob ☐

** Supplied in the component pack.

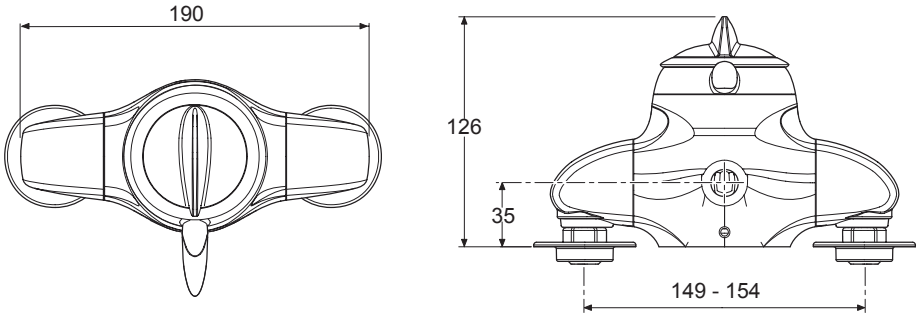
3. Documentation

1 x Installation & User Guide ☐

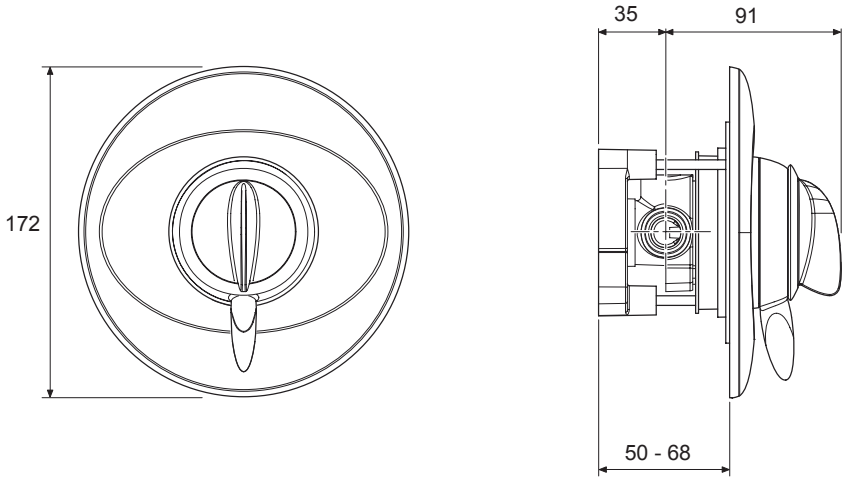
1 x Customer Support Brochure ☐

DIMENSIONS

1. Mira Gem 88 Surface Mounted Shower Control



2. Mira Gem 88 Built-in shower control



Note! All dimensions are nominal and in millimetres

SPECIFICATIONS

1. Pressure Range

Mira Gem 88

1.1 Minimum maintained pressure 0.1 bar (1.0 metre head) when used with Mira shower fittings.

1.2 Maximum maintained pressure 5 bar.

1.3 Maximum static pressure 10 bar.

Mira Gem 88 B

1.4 Minimum maintained pressure 0.1 bar.

1.5 Maximum maintained pressure 5 bar.

1.6 Maximum static pressure 10 bar.

2. Connections

Mira Gem 88

2.1 Inlet 15 mm compression.

2.2 Outlet 1/2" BSP male/15 mm Compression.

Mira Gem 88 B

2.3 Inlet 1/2" BSP female.

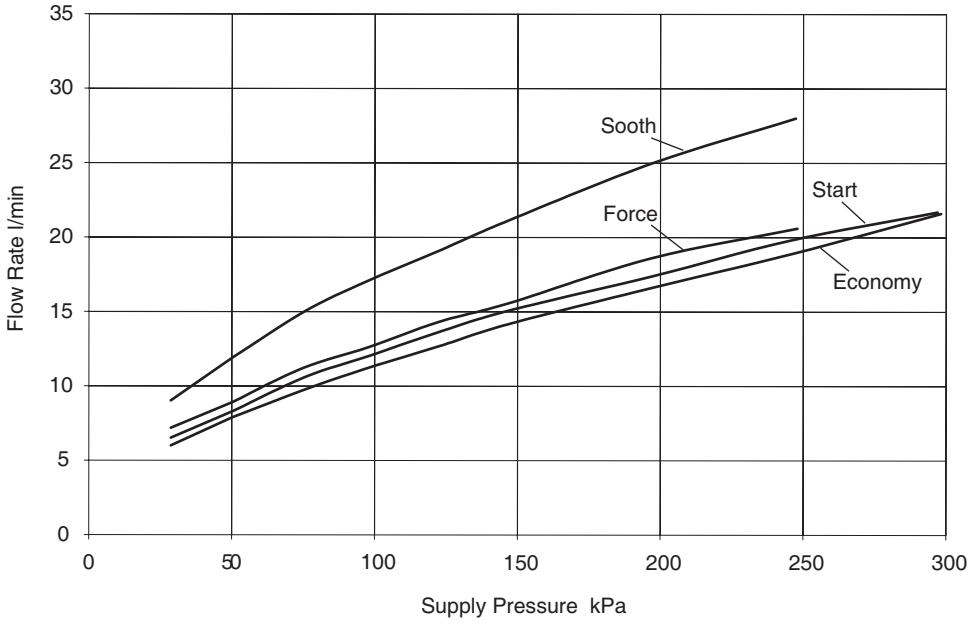
2.4 Outlet 1/2" BSP female.

3. Stored Water Temperature

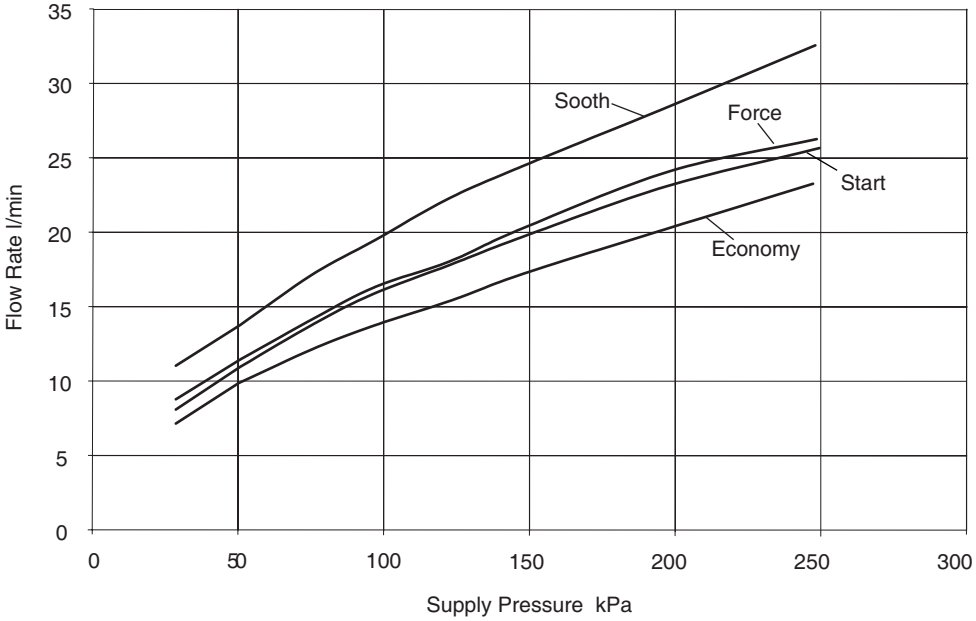
3.1 It is recommended that the temperature of stored water should never exceed 65°C. A stored water temperature of 60°C is considered sufficient to meet all normal requirements and will minimise the deposition of scale in hard water areas.

4. Flow Rates

Mira Gem 88 with LC Response Shower Fittings



Mira Gem 88 with HC Response Shower Fittings



INSTALLATION REQUIREMENTS

Read the section **'Important Safety Information'** first.

Installation must be carried out in accordance with these instructions, and must be conducted by designated, qualified and competent personnel.

1. Installations **must** comply with UK Water Regulations/ Bye-laws (Scotland), and Building and Plumbing Regulations in force at the time of installation.
2. Layout and sizing of pipework **must** be such that when other services are used, pressures at the shower control inlets are maintained approximately equal and **do not** fall below the recommended minimum.
3. **Do not** install the product in a position in which service access is restricted.
4. **Do not** fit any form of flow control in the shower outlet.
5. **Do not** use excessive force when making connections.
6. **Do not** install the product in a position where it could become frozen.
7. **Do not** install the Gem 88 to an instantaneous water heater or combination boiler system.
8. The Mira Gem 88 is designed to be fitted with the pipe centres set at a distance of 153 mm for rear supply connection and the pipe centres set at a distance of 151 mm for rising / falling pipes connection (See the installation template provided). If the Mira Gem 88 is replacing an existing shower, the distance between the pipes centre can vary from 149 to 154 mm to facilitate the installation.

Typical suitable installations

Key to symbols

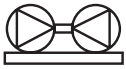
Float operated valve

Stop or servicing valve

Shower control

Warning or overflow pipe

Drop tight pressure reducing valve (PRV)



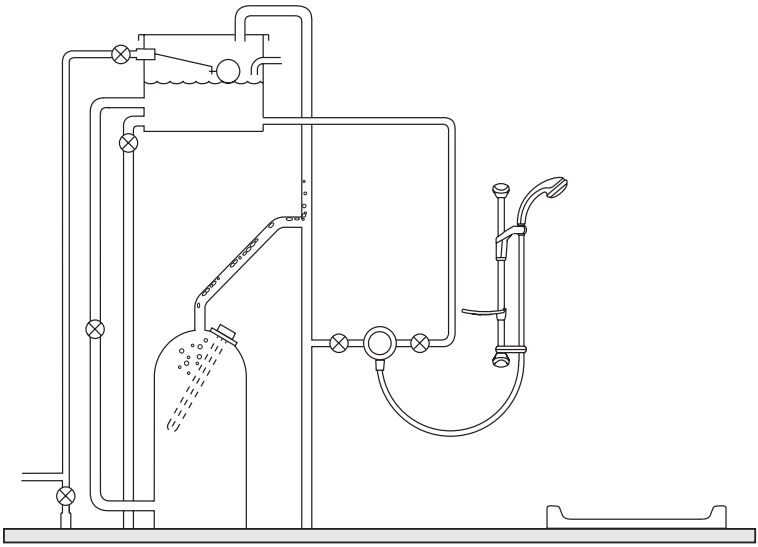
Twin impeller inlet pump

Tempering valve

Mini expansion vessel

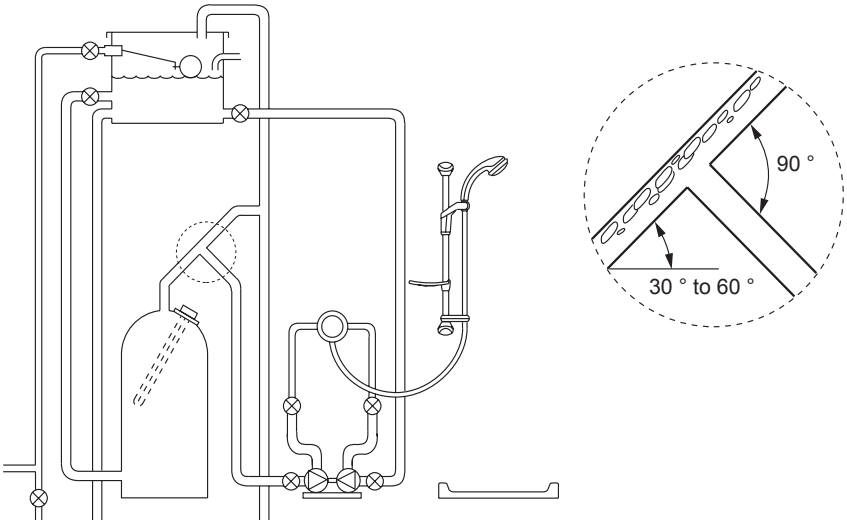
Non-return Valve

1. **Gravity fed showers** - The shower control **MUST** be fed from a **cold water storage cistern** and **hot water cylinder** providing nominally equal pressures.



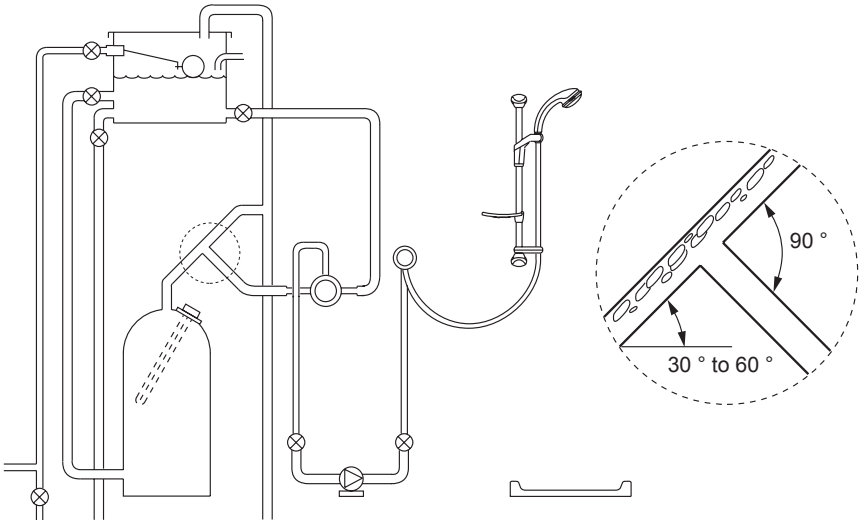
Gravity Fed Showers

2. **Pumped showers (inlet pumps)** - The shower control can be installed with an inlet pump (twin impeller). The pump **MUST** be located on the floor next to the hot water cylinder. The hot water cylinder/vent pipes must be arranged as shown to achieve air separation.



Pumped Showers (inlet pumps)

3. **Pumped showers (outlet pumps)** - The shower control can be installed with an outlet pump (single impeller). The pump **MUST** be located on the floor near to the shower control. The hot water cylinder/vent pipe must be arranged as shown to achieve air separation.

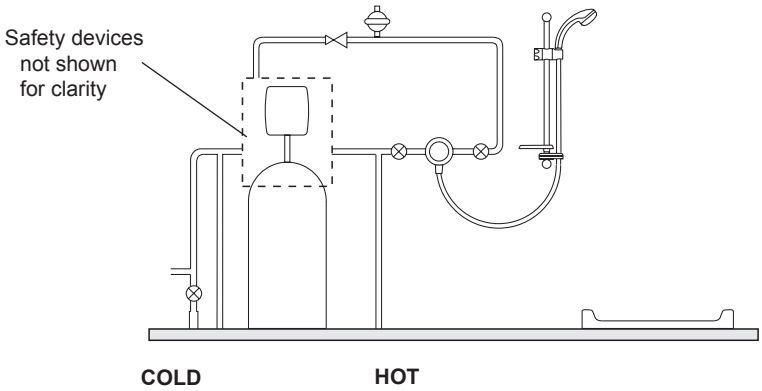


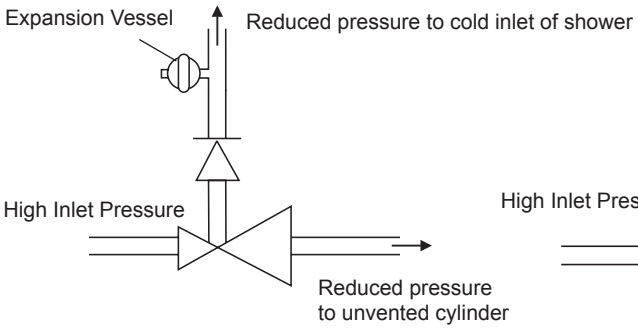
Pumped Showers (outlet pumps)

4. **Unvented mains pressure showers -** The shower can be installed with an unvented, stored hot water cylinder. Only a "competent person" as defined by the Building Regulations may fit this type of system.

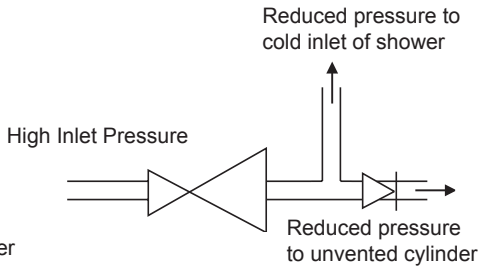
   For packages with no cold water take off after the appliance reducing valve, it will be necessary to fit an additional drop tight pressure reducing valve when the mains pressure is over 5 bar. The drop tight pressure reducing valve must be set at the same value as the unvented package pressure reducing valve.

   Note! An expansion vessel **MUST** be fitted (and regularly maintained) if any form of backflow prevention device is fitted, e.g. non-return valve or check valve. This will ensure that excess expansion or pulse pressures do not damage the product or the plumbing system.





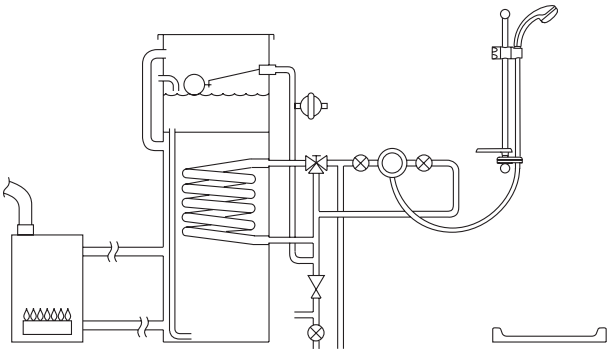
Combined outlet PRV with internal non-return valves - Expansion vessel required.



Cold takeoff after PRV - Expansion pressure taken up by unvented cylinder expansion vessel.

5. **Mains pressurised instantaneous hot water shower, heated from a thermal store -** Packages of this type, fitted with a tempering valve can be used. A drop tight pressure reducing valve **MUST** be fitted if the supply pressures exceed 5 bar maintained.

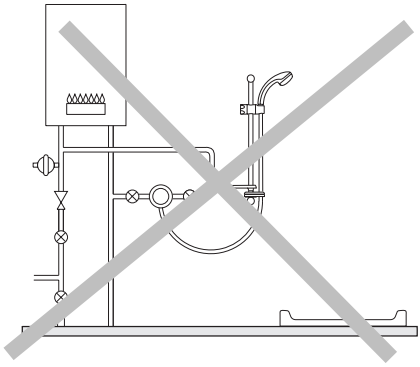
   An expansion vessel **MUST** be fitted (and regularly maintained) if any form of backflow prevention device is fitted, e.g. non-return valve or check valve. This will make sure that excess expansion or pulse pressures do not damage the product or the plumbing system. The expansion vessel may already be fitted externally or internally within the thermal store (check with thermal store manufacturer).



COLD HOT

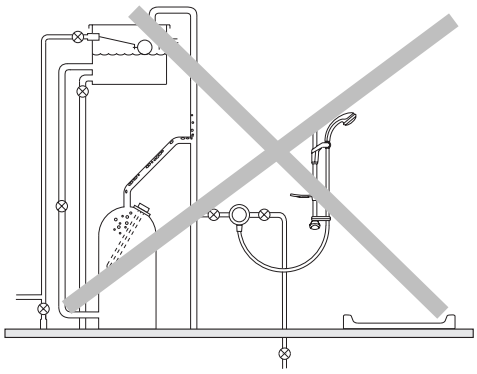
NOT SUITABLE FOR

INSTANTANEOUS WATER HEATERS/COMBINATION BOILERS



COLD HOT

GRAVITY HOT - MAINS PRESSURE COLD



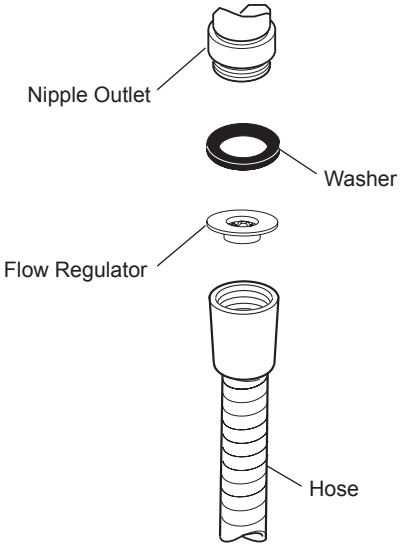
High pressure installations

If water flow from the shower is too high or maintained pressure over 1 bar, the fitting of a flow regulator is recommended (as illustrated below).

Exposed shower valves and BIV

Fit the white 12 l/min flow regulator to the hose.

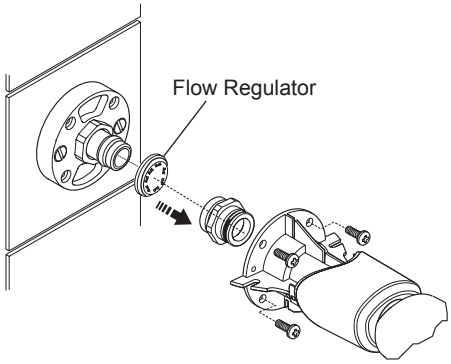
Flow Regulator



BIR Products

Fit the brown 12 l/min flow regulator.

Flow Regulator

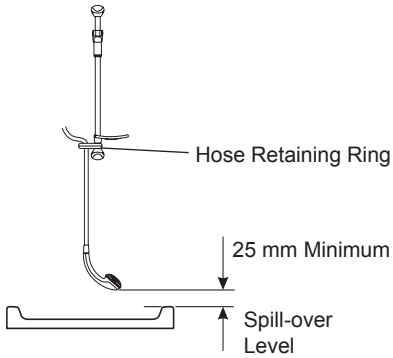


INSTALLATION

Mira Gem 88 - Surface Mounted Shower Control

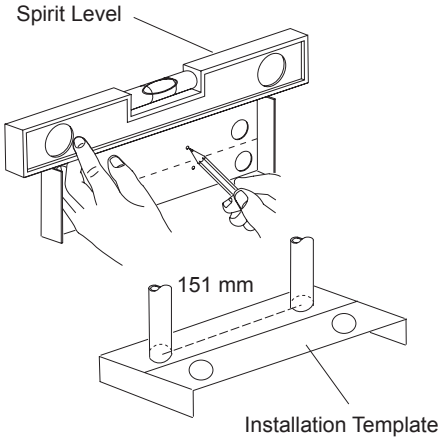
1. Rising and falling inlet supplies

1.1 Determine whether the hot or cold water services will be connected to the shower control from the bottom (rising) or top (falling).



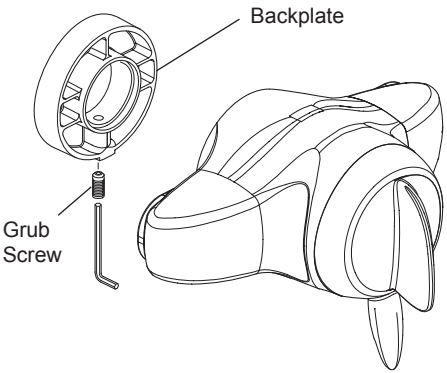
1.2 The Mira Gem 88 is supplied with inlet connections **hot left, cold right** and **bottom outlet** as standard.

1.3 Decide on a suitable position for the shower control. The position of the shower control and the shower fittings must provide a minimum gap of 25 mm between the spill-over level of the shower tray/bath and the handset. This is to prevent back-siphonage.



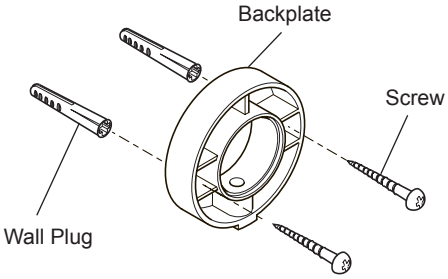
1.4 Use the installation template to mark the positions of the holes for the backplate.

Note! For rising/falling supplies the distance between the pipe centres is **151 mm** (See the installation template)



1.5 Loosen the backplate grub screws and using the 2.5 mm A/F hexagonal wrench provided, remove the backplate from the shower control body.

1.6 Drill and suitably plug the two fixing holes. Secure the backplate to the wall by means of the screws provided.

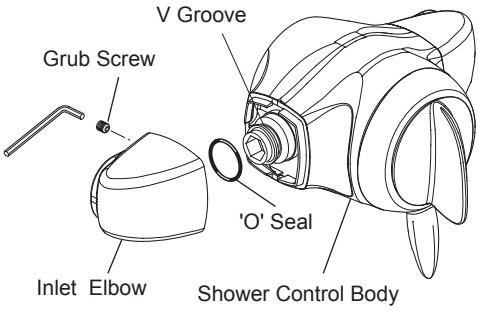


1.7 Install the hot and cold supply pipes. The distance between the pipe centres must be **151 mm**.

1.8 Adjust the inlet elbow to accept falling or rising supplies as follows:-

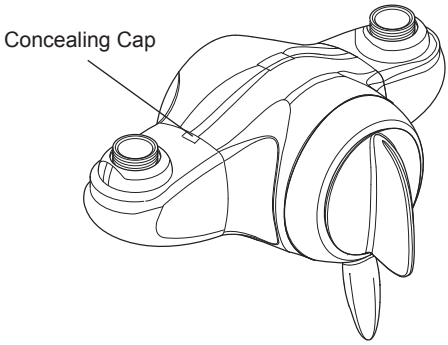
Using the 2.5 mm A/F hexagonal wrench loosen the grub screws and remove the inlet elbows.

Make sure that the 'O' seal is on the inlet connector, **not** in the 'V' groove.



Turn the inlet elbows to the required position and refit onto the inlet connectors.

Tighten the grub screws to fix the inlet elbows and fit the concealing caps.



1.9 Locate the shower control body onto the backplate and secure by tightening the recessed grub screw using the 2.5 mm A/F hexagonal wrench.

1.10 Thoroughly flush the incoming hot and cold water supply pipes before connecting the shower control.

1.11 Fit the compression nuts and olives over the supply pipes and then make the connection to the inlet pipework. Make sure that you protect the plated surfaces.

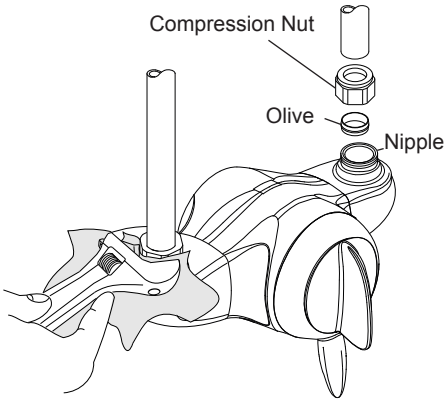
1.12 Turn on the water supplies to the shower mixer and check for any leaks.

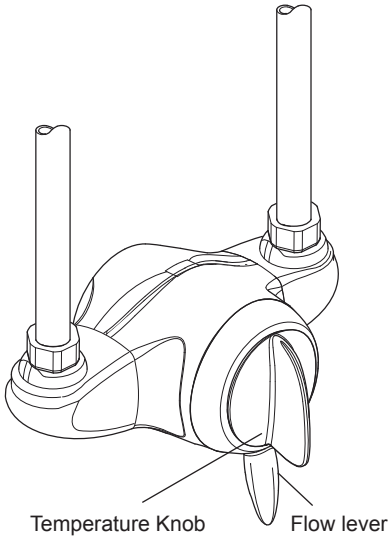
1.13 Turn the flow lever 1/4 of a full turn anticlockwise for water flow. Operate temperature knob and make sure that the directional hot and cold indicators are correct.

HOT = anticlockwise
COLD = clockwise
Note! If this is not the case, refer to section: **Reversed inlets**.

Turn flow lever fully clockwise to stop water flow.

1.14 This completes the installation of the **Mira Gem 88** for connection to **rising and falling inlet supplies**.





2. Rear entry inlet supplies

2.0 The Mira Gem 88 is supplied with inlet connections **hot left, cold right** and **bottom outlet** as standard.

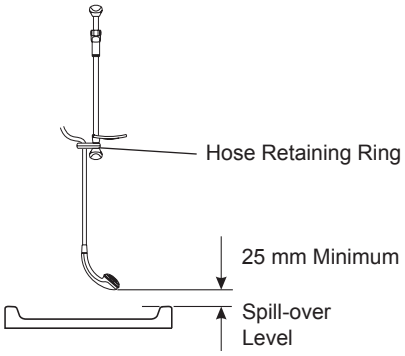
2.1 Decide on a suitable position for the shower control. The position of the shower control and the shower fittings must provide a minimum gap of 25 mm between the spill-over level of the shower tray/bath and the handset. This is to prevent back-siphonage.

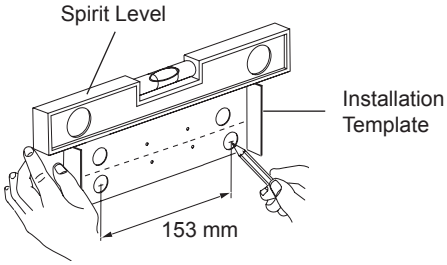
2.2 Use the installation template to mark the positions of the holes for the backplate and the pipes centre.

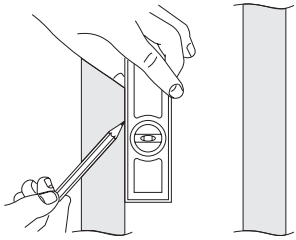
2.3 Use a spirit level and a pencil to mark the route for the hot and cold water supply pipes at **153 mm** centres.
Note! If the Mira Gem is replacing an existing shower, the distance between the pipe centres is adjustable from 149 to 154 mm to facilitate installation.

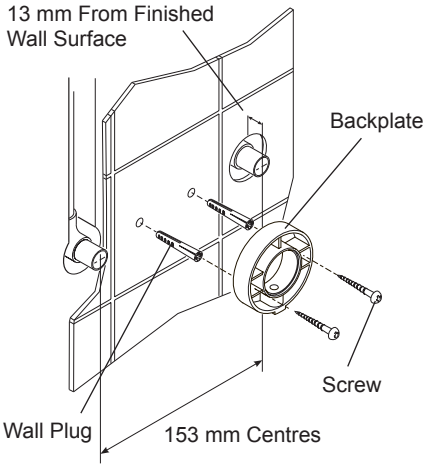
2.4 Remove the plaster and brick/block to the required depth to conceal the pipework.

2.5 Install the supply pipes. The pipes must project from the finished wall by **13 mm**. Finish the surface of the wall as required. The recesses in the wall for the concealing plates must be 32 mm diameter x 10 mm deep.









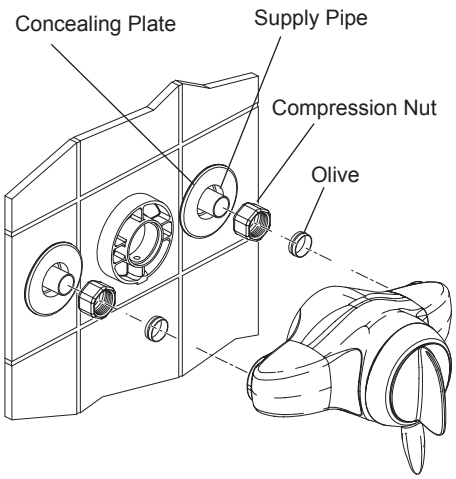
2.6 Loosen the backplate grub screw and using the 2.5 mm A/F hexagonal wrench provided, remove the backplate from the shower control body.

2.7 Drill and suitably plug the two fixing holes. Secure the backplate to the wall by means of the screws provided.

2.8 Fit the concealing plates over the pipework into the enlarged recess in the finished wall surface.

2.9 **Thoroughly flush the incoming hot and cold water supply pipes before connecting the shower control**.

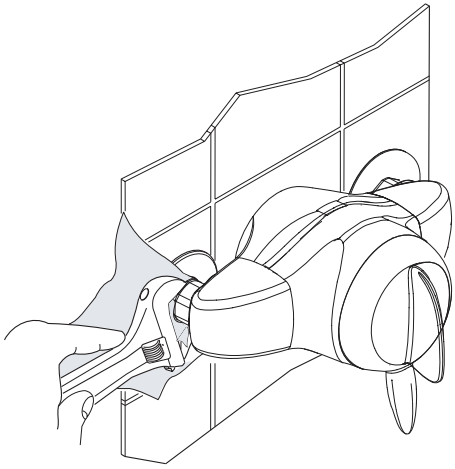
2.10 Fit the compression nuts and olives to the supply pipes.



2.11 Align the valve over the backplate and inlet pipe work. If the pipe work and the nipples are not aligned, the nipples can be moved to achieve the alignment. This adjustment can achieve an alignment of the pipes centre between 149 - 154 mm.

2.12 Locate the shower control body onto the backplate and secure by tightening the grub screw using the 2.5 mm A/F hexagonal wrench (supplied).

Make the connections to the inlet pipework. Protect the chrome plated surfaces when tightening the compression nuts.

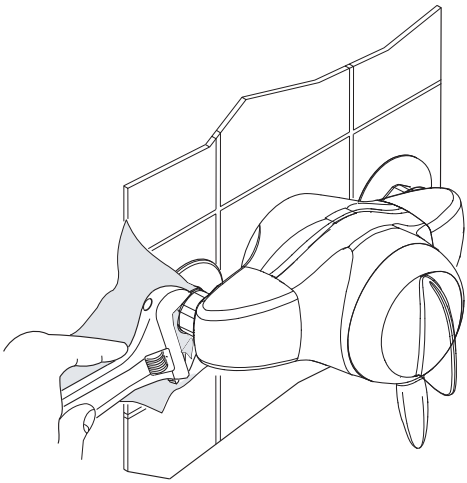


2.13 Turn on the water supplies to the shower mixer and check for any leaks.

2.14 Turn the flow knob fully anticlockwise for water flow. Operate the temperature knob and make sure that the directional hot and cold indicators are correct.

HOT = anticlockwise
COLD = clockwise

Note! If this is not the case, refer to section: **Reversed inlets.**
Turn the flow knob fully clockwise to stop the water flow.



2.15 This completes the installation of the **Mira Gem 88** for connection to **rear entry inlet supplies**.

Mira Gem 88 B - Built-in Shower Control

The built-in shower control is designed to be concealed into a solid or dry-lined wall structure. A support bracket assembly (optional accessory) is available which can be used to fix the shower control into a shower cubicle, laminated panel, stud partition or dry partition wall.

The building-in depth (to the finished wall surface) is between **50** and **68 mm**. The building-in depth dictates how much of the flow and temperature control knob will be visible through the concealing plate when the installation is completed.

A building-in shroud is supplied to protect the shower control during plastering and tiling and provides a reference for the building-in depth when chasing out the wall.

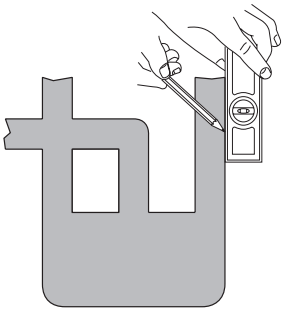
The shower control is not supplied with any interconnecting pipework or plumbing fittings. Inlet and outlet threads are 1/2" BSP female parallel.

The Mira Gem 88 B has inlet connections **hot left, cold right** and **top outlet** as standard.

1. Solid or dry-lined wall structures

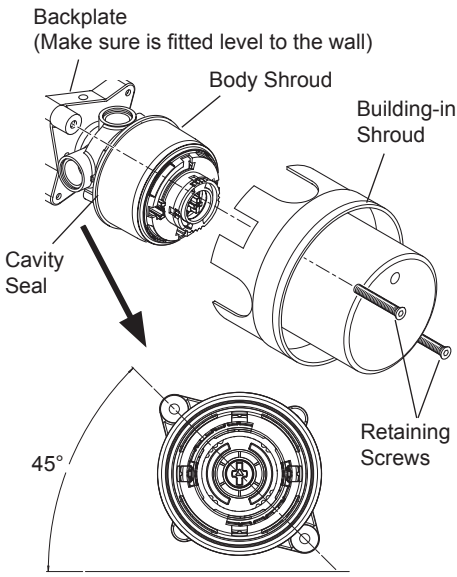
1.1 Make a recess in the wall large enough for the shower control, pipework and plumbing connections.

Make sure that the building-in depth is correct.



1.2 Remove the plastic building-in shroud. The two building-in shroud retaining screws should be screwed temporarily into the base for use later.

Note! Do not remove the Body Shroud or Seal. If the cavity seal or shroud have been removed or are incorrectly fitted, refer to section: **'Refitting the Cavity Seal'.**



1.3 Drill and plug the fixing holes. Using the screws provided, if appropriate, fix the shower control and backplate assembly into the recess, making sure that the two retaining screw holes are at 45° as illustrated. (**Make sure that the shower control inlets are horizontal with the shower control outlet at the top**).

1.4 Install the hot and cold supplies.

1.5 **Thoroughly flush the incoming hot and cold water supply pipes before connecting the shower control**.

1.6 Make the connections to the incoming hot and cold water supply pipes and outlet supply pipe using the appropriate fittings (install the shower outlet pipework).

1.7 Turn on the water supplies and check for any leaks.

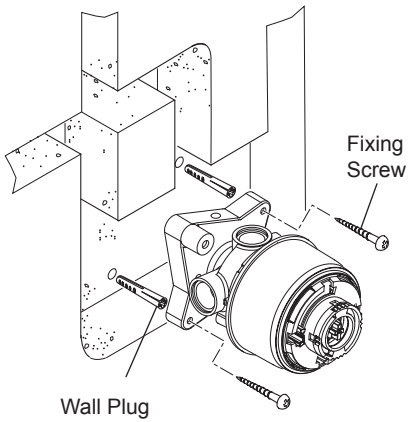
1.8 Refit the plastic building-in shroud over the shower control body and secure with the two shroud retaining screws removed in instruction **1.2.**

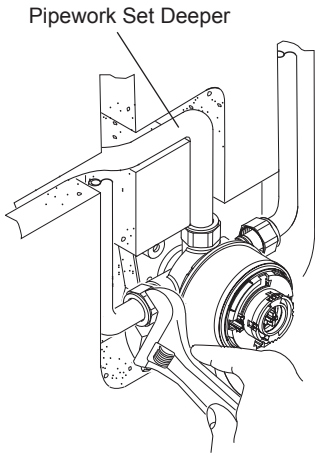
Plaster and tile to the sides of the plastic building-in shroud (refer to illustration), when set remove the shroud, retain the screws for later use.

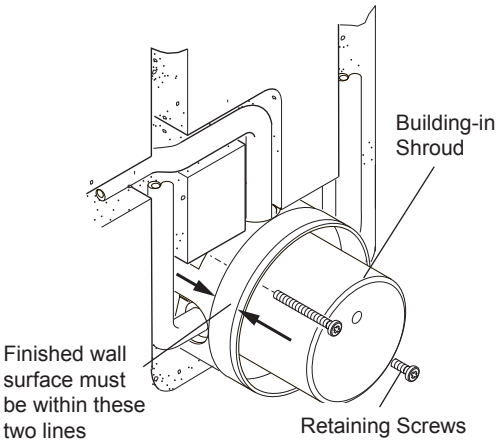
Make sure that the supply pipework is able to maintain free movement in a solid wall and is protected, it is suggested that each pipe is concealed into a suitably sized conduit.

Note! If the shower control is recessed too deep the two shroud retaining screws will not reach the backplate assembly and the shower flow control may foul the concealing plate.

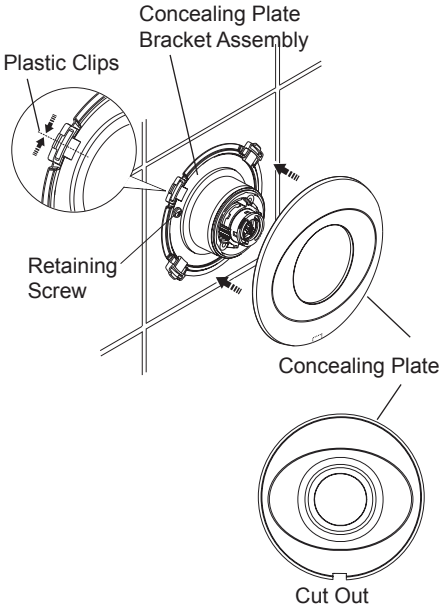
If the cavity seal or shroud have been removed or are incorrectly fitted, refer to section: **'Refitting the Cavity Seal'.**







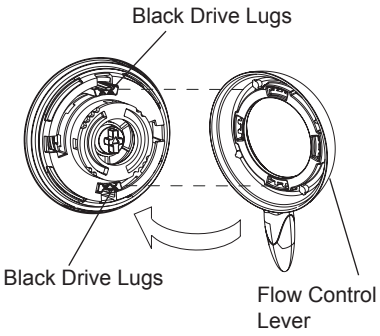
1.9 Fit the concealing plate bracket assembly over the valve and fix to the wall with the two retaining screws (Take care not to damage the foam seal).



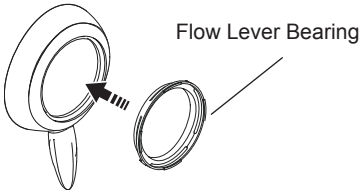
1.10 Fit the concealing plate over the valve. Make sure that the plastic clips are aligned centrally on the metal bracket recess as illustrated. The cut out must be facing downwards.

Note! Do not silicone seal the concealing plate to the finished wall surface.

1.11 The black drive lugs should be at the 12 o'clock and 6 o'clock positions. Firmly push the flow control lever, with the handle pointing downwards over the black lugs.



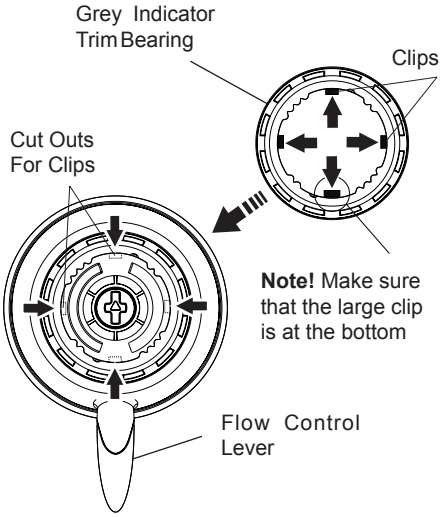
1.12 Push the flow lever bearing into the recess on the flow control lever.



1.13 Lock the flow control lever in position by pushing the grey indicator trim bearing over the cartridge. The four clips on the inner edge of the grey indicator trim bearing should clip into the four cut outs in the cartridge.

Note! Make sure that the larger of the four clips is fitted at the bottom.

Tip! Fit the bottom clip first.



1.14 Locate the indicator trim over the splines of the cartridge. Make sure that the colour temperature graphics are at the top with cold in the clockwise position.

1.15 Make sure that the temperature knob is correctly aligned and push into position until it clicks.

1.16 Install the shower fittings (refer to separate installation guide).

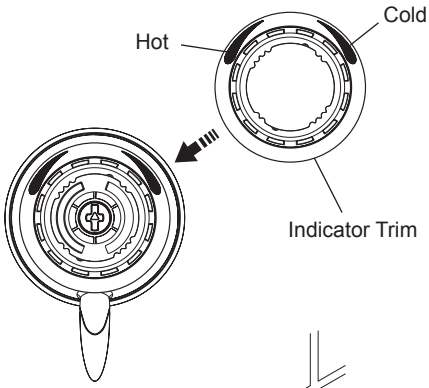
1.17 Turn the flow lever 1/4 of a turn anticlockwise for water flow.

Operate the temperature knob and make sure directional hot and cold indicators are correct.

HOT = anticlockwise

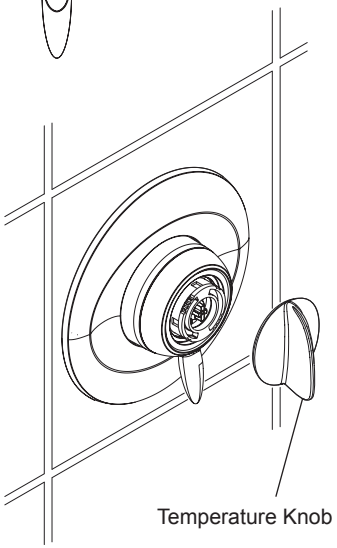
COLD=clockwise

Note! If this is not the case refer to section: **'Reversed inlets'.**



Turn flow knob fully clockwise to stop water flow.

1.18 This completes the installation of the **Mira Gem 88 B** into **solid or dry-lined wall structures**.



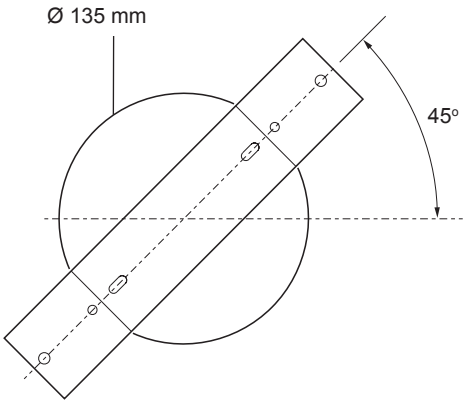
2. Stud partition or dry partition wall structures

The support bracket (from Mira stocklist as an optional accessory) has been designed to allow the shower control to be installed into the front face of a stud partition wall and is recommended for this type of installation. However, installers may wish to consider other options such as fabricated rear supports using wooden noggins, however, these methods of fixing are beyond the scope of this guide.

The building-in depth (to the finished wall surface) is between **50** and **68 mm**. The building-in depth dictates how much of the flow and temperature control knob will be visible through the concealing plate when the installation is completed. The bracket must be fixed into a wall recess at an angle of **45**˚ from horizontal.

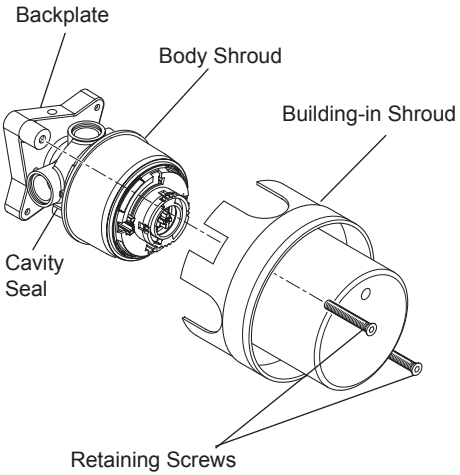
2.1 Cut a 135 mm diameter hole in the panel and mark the fixing holes for the support bracket (if used) at 45˚.

Make sure that the building-in depth is correct.



2.2 Remove the plastic building-in shroud. The two building-in shroud retaining screws should be screwed temporarily into the backplate for use later.

Note! Do not remove the Body Shroud or Seal. If the cavity seal or shroud have been removed or are incorrectly fitted, refer to section: **'Refitting the Cavity Seal'.**

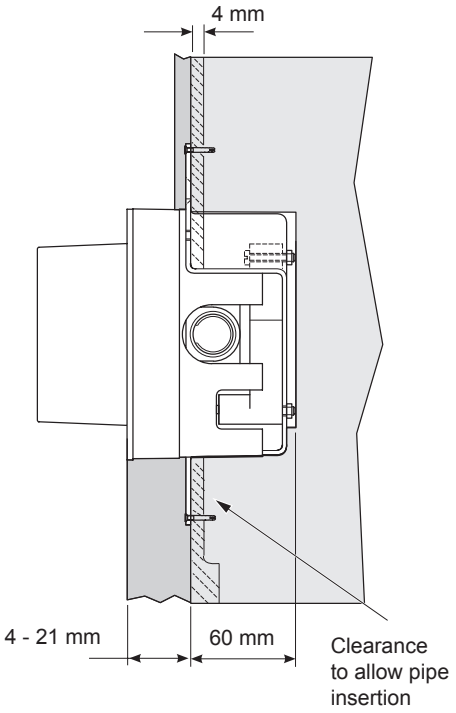


2.3 Fit the shower control to the support bracket with the screws, nuts and washers supplied.

Fix the support bracket and shower control in position using suitable fixing (not supplied).

Note! The support bracket requires a clearance depth of **60 mm**, with a wall thickness of **4 mm**. Wall thicknesses in excess of 4mm can be accommodated, but clearance will be required around the inlet and outlet connections to allow insertion of pipe and tightening of compression nuts.

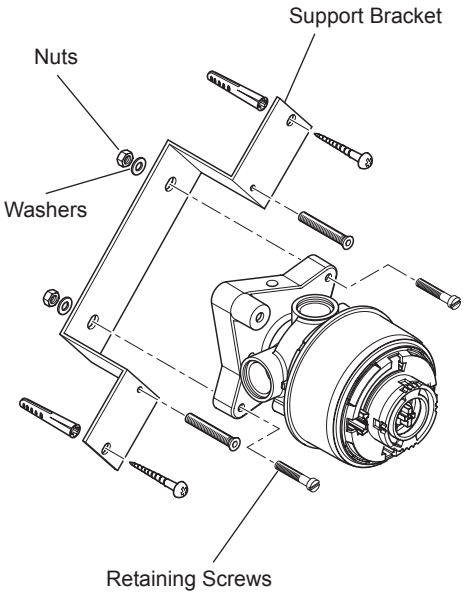
The raised portion on the building-in shroud can be used as a depth gauge, to allow a finished wall thickness between 4 and 21 mm.



2.4 Drill and suitably plug the four marked fixing holes.

2.5 Secure the support bracket to the wall with the screws and plugs provided.

2.6 Follow the shower control installation procedure as for **"Solid or dry-lined wall structures"**: **instructions 1.4** to **1.17 inclusive** to complete the installation.

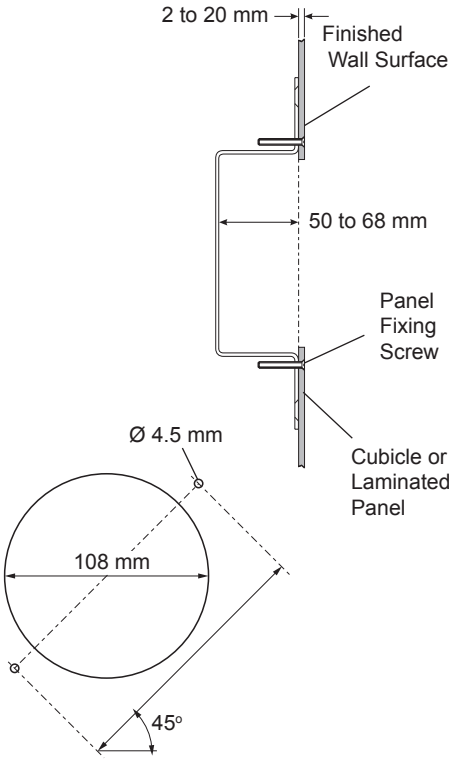


3. Shower cubicle or laminated panel

The support bracket (optional) is recommended to fit the shower control into a shower cubicle or laminated panel **2 - 20 mm** thick.

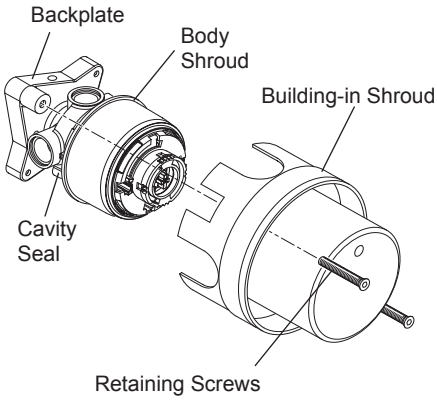
The dimension from the bracket to the finished wall surface is **50 - 68 mm**.

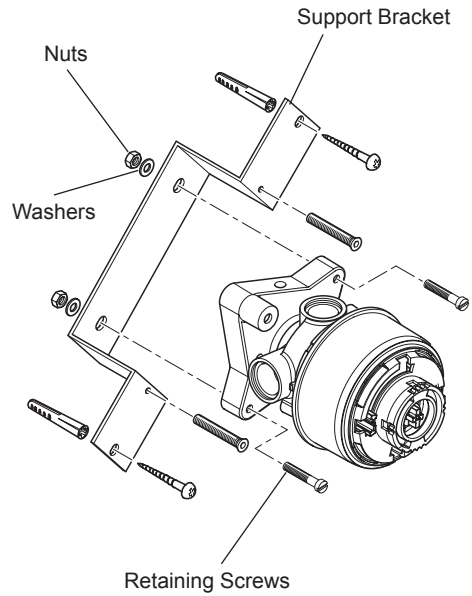
3.1 Cut a **108 mm** diameter hole in the panel and drill two **4.5 mm** holes at **138 mm** centres at an angle of **45°** from the horizontal.



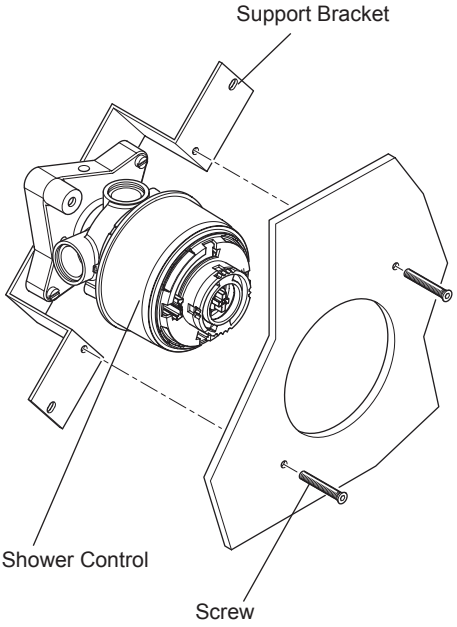
3.2 Remove the plastic building-in shroud. The two building-in shroud retaining screws should be screwed temporarily into the backplate for use later.

Note! Do not remove the Body Shroud or Seal. If the cavity seal or shroud have been removed or are incorrectly fitted, refer to section: **'Refitting the Cavity Seal'.**





3.3 Fit the shower control and the backplate to the support bracket with the screws, the nuts and the washers supplied.

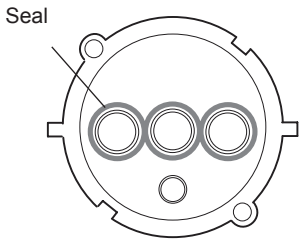


3.4 Secure the bracket to the wall with the screws provided.

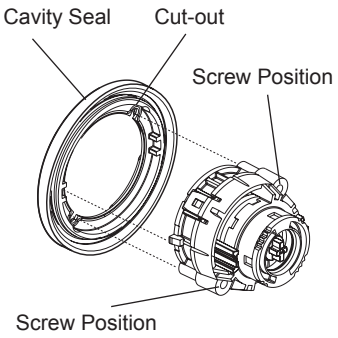
3.5 Follow the shower control installation procedure as for **Solid or dry-lined wall structures instructions 1.4** to **1.7** and **1.9** to **1.17**.

REFITTING THE CAVITY SEAL

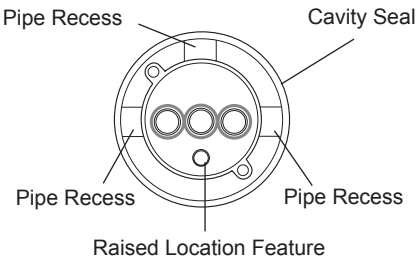
1. Unscrew and remove the two cartridge retaining screws and remove the cartridge from the body.
2. Check that the seal on the base of the cartridge is clean and fitted.



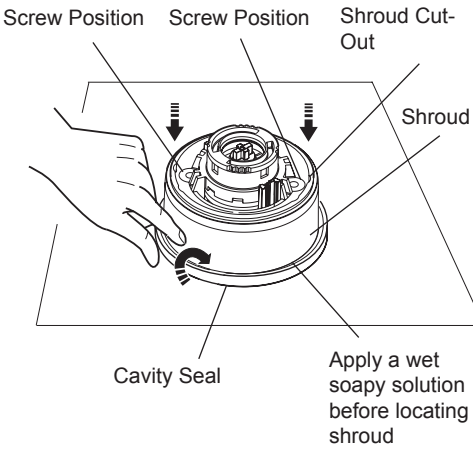
3. Align the cut-outs on the cavity seal with the screw positions on the cartridge.



4. Make sure that the pipe recesses on the cavity seal are aligned as illustrated.



5. Place the cavity seal and the cartridge assembly on a flat surface.

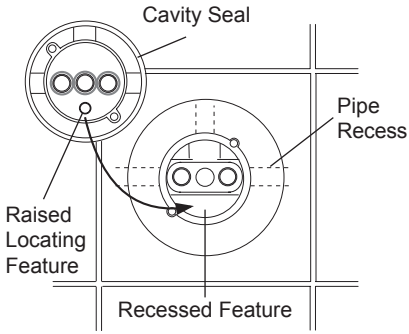


6. Align the cut-outs on the shroud with the screw positions on the cartridge. Push down firmly on the shroud while lifting the edge of the cavity seal over the lip of the shroud.

Note! A wet soapy solution applied around the edge of the cavity seal will aid location.

7. Note the raised locating feature on the cartridge, align this feature as shown with the recessed feature in the brass body. Push the cartridge firmly into position.

Caution! If the cartridge is not positioned correctly the shower will leak from the body when the water supply is turned on.



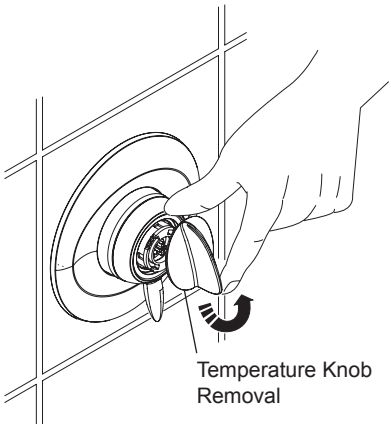
8. Secure the cartridge into position with the two cross head screws.

Caution! Do not overtighten the screws as you may damage internal components.

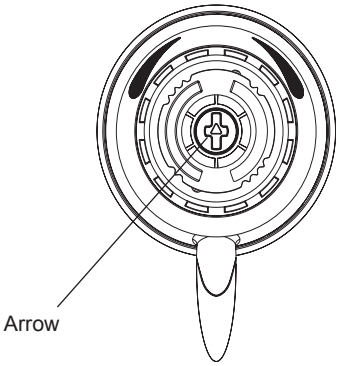
REVERSED INLETS

In the event that the temperature control is not functioning as described, anticlockwise **HOT** and clockwise **COLD,** then follow the instructions below.

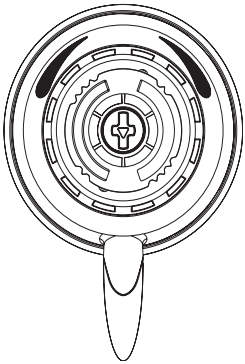
1. Make sure the temperature control is positioned with the levers pointing down, as illustrated.



2. Unclip the temperature knob by hand to access the cartridge spindle. The arrow on the spindle must be in the upwards position.



3. Rotate the temperature spindle through 180° until the arrow points downwards to reverse the inlets.



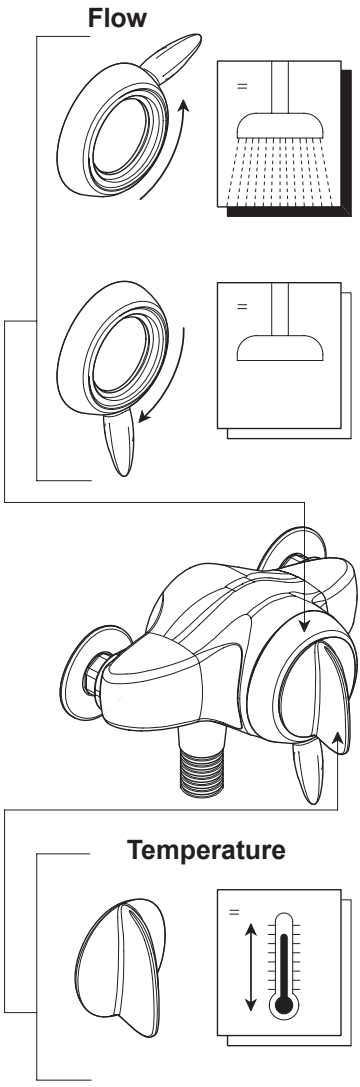
4. Fit the temperature knob.

OPERATION

Warning!

The temperature control can be turned from **FULL HOT** to **FULL COLD**. As such, turning the control to full hot will deliver water at the hot water storage temperature.

1. Turn the flow control lever 1/4 of a full turn anticlockwise to turn the water on or clockwise to turn the water off.



2. Turn the temperature control knob in the direction of the red arrow for warmer water and in the direction of the blue arrow for cooler water, until the desired temperature of water is obtained.

Note! If this is not the case refer to section: **Reversed inlets**.

MAINTENANCE

Fault diagnosis

Read the section **"Important Safety Information"** first.

Mira products are fully performance tested after assembly. In the unlikely event that you experience problems with your shower the following procedure will enable you to undertake basic fault finding before contacting Kohler Mira Limited for further assistance or spare parts as necessary.

If after completing the checks no improvement in performance is experienced, then further investigation should be undertaken by the person responsible for installing your shower. Only competent persons should remove the cover of the shower control.

Malfunction	Cause	Remedy
Cold water flow from the shower handset.	a) Hot water used up. b) Low water temperature, setting of hot water system (typically 60° - 65°C). c) Cold supply pressure too high relative to hot.	Wait for the water to reheat. Contact the person responsible for installing your shower. Refer to section: **Installation Notes** for plumbing advice.
No flow or low flow rate from the shower handset.	a) Spray plate blocked. b) Stop or servicing valve in supply pipe partially closed. c) Head of water below minimum required. d) Wrong handset or spray plates for available pressure.	Clean spray plate. Open valve/s. Raise cistern or fit Mira pump. Fit correct handset or change spray plates.
Cold water when hot is selected or vice versa.	a) Reversed inlets.	Refer to section: **Reversed Inlets**.
Too high flow when flow control is fully open.	a) Mixer installed on a High pressure system. **Note!** This shower is **not** suitable for combination boilers or instantaneous water heaters.	Fit the flow regulator supplied
Drip from the shower handset. *	a) Defective flow control seals, possibly caused by failure to flush pipework prior to installation.	Replace cartridge. Refer to section: **Parts list**.

*** A small amount of water may be retained in the shower head after the shower control has been turned off. This may drain off over a period of minutes and should not be confused with a "Defective flow control".**

General

The Mira Gem 88 shower control is precision engineered to provide satisfactory performance provided that it is installed and operated in accordance with our recommendations contained in this guide.

When installed in very hard water areas (above 200 p.p.m. temporary hardness) your installer may advise the installation of a water treatment device to reduce the effects of limescale formation.

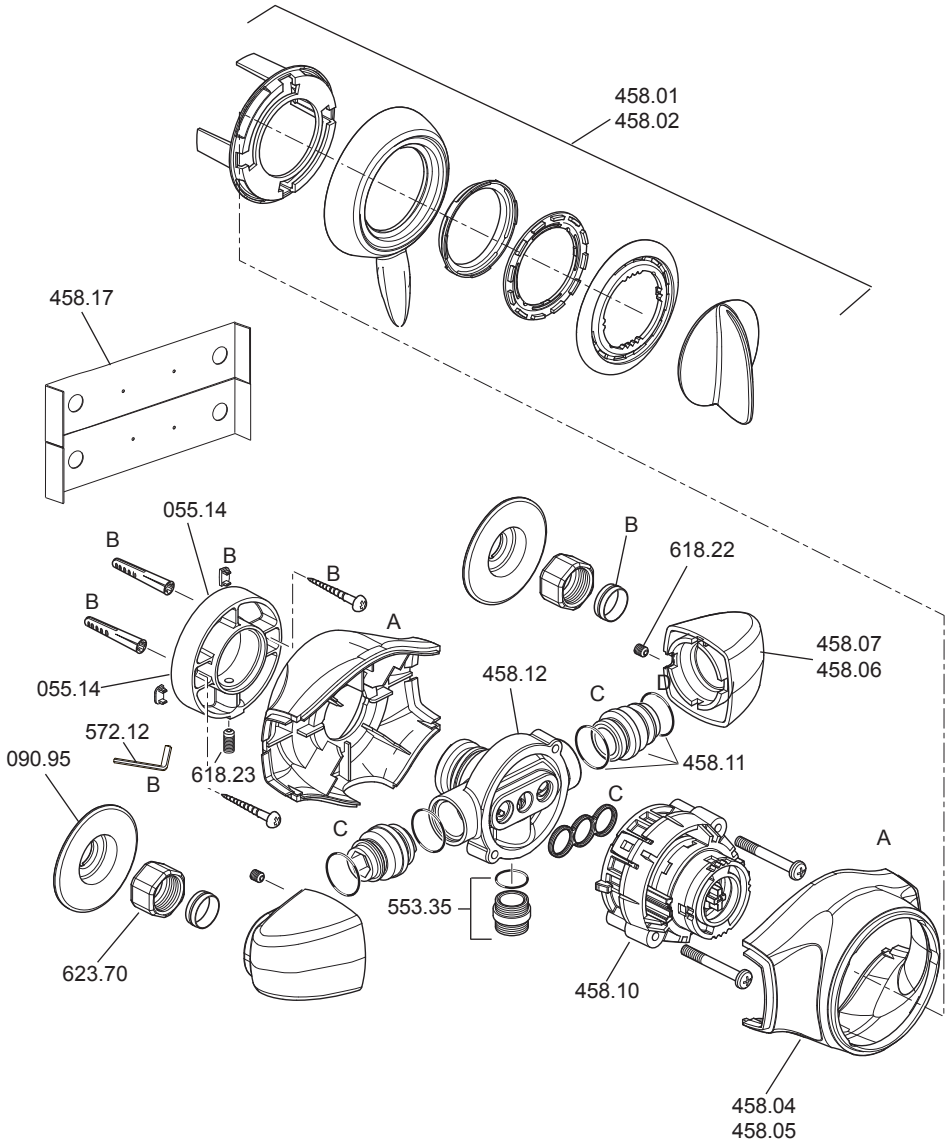
You may, if you wish, choose to engage the services of a Mira Service Engineer or Agent, the terms of which are outlined on the back page of this guide.

SPARE PARTS

Mira 88 spare parts list

055.14	Backplate Assembly
090.95	Pipe Concealing Plate - chrome
458.01	Handle pack - chrome
458.02	Handle pack - white
458.04	Body trim pack - chrome - components identified 'A'
458.05	Body trim pack - white - components identified 'A'
458.06	Elbow pack - chrome
458.07	Elbow pack - white
458.10	Cartridge
458.11	Inlet connector
458.12	Body
458.13	Component pack - Exposed chrome - components identified 'B'
458.14	Component pack - Exposed white - components identified 'B'
458.15	Seal pack - components identified 'C'
458.17	Installation template
458.19	Flow Regulators pack (Not illustrated)
553.35	Nipple Assembly - chrome
575.12	2.5 mm A/F Hexagonal Wrench
618.22	Grub screw
618.23	Grub screw
623.70	Compression Nut - chrome

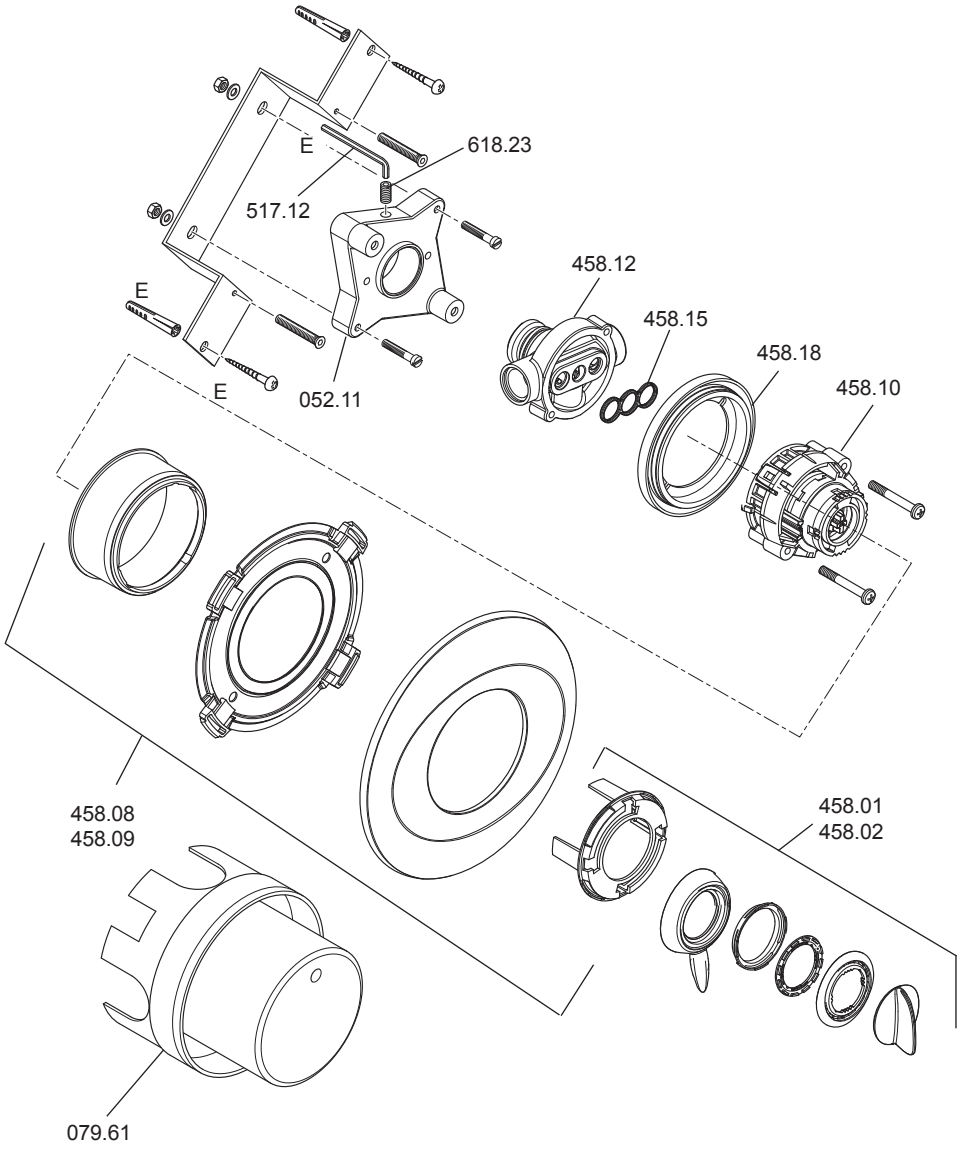
Mira Gem 88 spare parts diagram



Mira Gem 88 B spare parts list

052.11	Backplate Assembly
079.61	Building-in Shroud
458.01	Handle pack - chrome
458.02	Handle pack - white
458.08	Concealing plate assembly
458.09	Concealing plate assembly
458.10	Cartridge
458.12	Body
458.16	Concealing plate mounting kit - components identified 'D'
458.18	Cavity seal
458.19	Flow Regulators pack (Not illustrated)
458.20	Component Pack - components identified 'E'
575.12	2.5 mm A/F Hexagonal Wrench
618.23	Grub screw

Mira Gem 88 B spare parts diagram

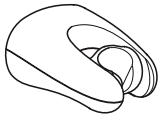


ACCESSORIES

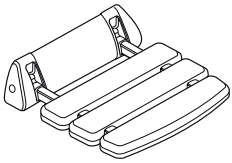
Genuine Mira accessories can be purchased direct from Customers Services (our contact details can be found on the back cover of this guide) or from approved stockists or merchants.

Eco Showerhead
White - 2.1668.001
Chrome - 2.1668.002
The Eco shower head gives you an invigorating shower, but reduces water consumption and heating costs.

Everclear Showerhead
White - 2.1616.030
Chrome - 2.1616.031
Mira's new Everclear range has been specially designed for hard water areas and reduces the risk of lime scale build up.

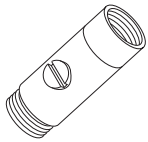


Logic Showerhead Holder
White - 2.1605.149
White/Chrome - 2.1605.150
An alternative to the traditional slide bar. Often a useful addition when positioned for the smaller members of the family.



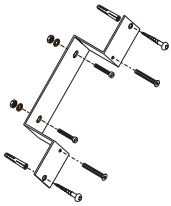
Shower Seat
White - 2.1536.128
White/Chrome - 2.1536.129
For use in or out of the showering area. Folds up when not in use. Maximum User Weight - 127 kg (20 stone) **Note!** Must be installed onto a solid wall.

Premium Shower Seat
White/Chrome - 2.1731.001
Grey/Chrome - 2.1731.002
Stylish, slim-line and robust shower seat for use in or outside of the shower area. Folds up when not in use. Maximum User Weight - 150 kg (23.5 stone) **Note!** Must be installed onto a solid wall.



Outlet Double Check Valve (DCV-H)
Chrome - 1.0.110.55.1
An outlet double check valve, designed to prevent the back flow or back-siphonage of potentially contaminated water, through shower controls which are fitted with a flexible shower hose as part of the outlet shower fitting.

Mira Standard Grab Bars
300 mm - 2.1605.070
450 mm - 2.1605.071
600 mm - 2.1605.072
Premium grade, highly polished, stainless steel grab bars.
Note! Must be installed onto a solid wall.



Support Bracket
805.38
Allows the shower control to be fitted into a shower cubicle, stud partition or dry partition wall. Available as optional accessory from your Mira stockist.

NOTES

NOTES

CUSTOMER SERVICE

Guarantee

Your product has the benefit of our manufacturer's guarantee which starts from the date of purchase.

To activate this guarantee, please return your completed registration card, visit our website or free phone 0800 0731248 within 30 days of purchase (UK only).

Within the guarantee period we will resolve defects in materials or workmanship, free of charge, by repairing or replacing parts or product as we may choose.

If you have not previously activated the guarantee, you will be required to do so prior to the provision of assistance. If you do not activate your guarantee our Engineer will be entitled to charge full payment for the visit (Call out fee plus parts).

This guarantee is in addition to your statutory rights and is subject to the following conditions:

- The product must be installed and maintained in accordance with the instructions given in this user guide.
- Servicing must only be undertaken by us or our appointed representative. **Note!** if a service visit is required the product must be fully installed and connected to services.
- Repair under this guarantee does not extend the original expiry date. The guarantee on any replacement parts or product ends at the original expiry date.
- For shower fittings or consumable items we reserve the right to supply replacement parts only.

The guarantee does not cover:

- Call out charges for non product faults (such as damage or performance issues arising from incorrect installation, improper use, lack of maintenance, build up of limescale, frost damage, corrosion, system debris or blocked filters) or where no fault has been found with the product.
- Water or electrical supply, waste and isolation issues.
- Compensation for loss of use of the product or consequential loss of any kind.
- Damage or defects caused if the product is repaired or modified by persons not authorised by us or our appointed representative.
- Routine maintenance or replacement parts to comply with the requirements of the TMV 2 or TMV 3 healthcare schemes.

What to do if something goes wrong

If your product does not function correctly when you first use it, contact your installer to check that it is installed and commissioned in accordance with the instructions in this manual. Should this not resolve the issue, contact our Customer Services Team who will offer you or your installer advice and if applicable arrange for a Service Technician to call. If the performance of your product declines, check in this manual to see if simple home maintenance is required. If you require further assistance call our Customer Services Team.

Extended Guarantees

A selection of protection plans are available that enable you to cover repair bills for the life of your policy (excludes Eire). Ring 01922 471763 for more details.

Helpdesk Service

Our dedicated Customer Services Team is comprehensively trained and can offer help and advice, spare parts, accessories or a service visit. We will need you to have your model name or number, power rating (if applicable) and date of purchase. As part of our quality and training programme calls may be recorded or monitored.

Mira Showers Website (www.mirashowers.co.uk)

From our website you can register your guarantee, download additional user guides, diagnose faults, purchase our full range of accessories and popular spares, refer to our FAQ's and request a service visit.

Spares and Accessories

We maintain extensive stocks of genuine spares and accessories and aim to provide support throughout the product's expected life. Payment can be made by phone at time of order using most major Credit or Debit cards and we aim to despatch orders within two working days. Items purchased from us are guaranteed for 12 months from date of purchase. For safety reasons spares exposed to mains voltages should only be fitted by competent persons.

Returns – items can be returned within one month of date of purchase, providing that they are in good condition and the packaging is unopened. Please obtain authorisation from our Customer Services Team before return. We reserve the right to apply a 15% restocking charge.

Service / Repairs

We have a nationwide team of Service Technicians who can carry out all service or repair work to your product within the guarantee period and beyond. You have the assurance of a fully trained Mira Technician, genuine Mira spare parts and a 12 month guarantee on any chargeable work done.

Payment should be made directly to the Service Technician who will accept most major Credit or Debit cards.

To Contact Us

UK

Telephone: 0844 571 5000

www.mirashowers.co.uk

E-mail: technical@mirashowers.com

Fax: 01242 282595

By Post: Mira Customer Services Dept, Cromwell Road, Cheltenham, Gloucestershire, GL52 5EP

Eire

Telephone: 01 459 1344

E-mail: sales@modernplant.ie

Fax: Dublin 01 459 2329

By Post: Modern Plant Ltd (Dublin), Otter House, Naas Road, Clondalkin, Dublin 22

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FM 14648

SHOWERS

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